

Date: Thursday, 11/09/2008 10:43:48 AM
 User: Julie Lecocq

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	206L AFT X-TUBE
Job Number :	41989		
Estimate Number :	10973		
P.O. Number :		Part Number :	D206667203
This Issue :	11/09/2008	S.O. No. :	
Prsht Rev. :	NC	Drawing Number :	D206-667-243 REV B
First Issue :	//	Project Number :	N/A
Previous Run :	41817	Drawing Revision :	B
	Type :	Material :	
	CROSSTUBES	Due Date :	26/09/2008
Written By :		Qty:	1
Checked & Approved By :	JUL 08-09-11	Um:	Each
Comment :	Est Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM Est Rev:G 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec Est Rev:H 08-07-18 remove thread masking in step 12 DD verified by:EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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**Comment:** DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-203 CHG003

506/6/22

2.0	D206667203TRN	Crosstube Turning Detail
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**Comment:** Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch B42304

DP 8-10-9

3.0	BENDING	BENDING MACHINE - SKIDTUBES
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**Comment:** BENDING MACHINE

Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF and Folio FT

DP 8-10-9

4.0	QC15	DIMENSIONAL CHECK OF X-TUBES
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**Comment:** DIMENSIONAL CHECK OF X-TUBES

UP 08.10.14

5.0	CROSSTUBES	CROSSTUBES RESOURCE 1
-----	------------	-----------------------

**Comment:** LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill all (3) top holes.






2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243

3.85 08-10-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 08/10/09

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08.10.14	3	Tube is high and bent narrow	 08.10.14 PC 08/10/09	Tube acceptable	 8-10-28	 08/10/09	 08.10.14 PC 08/10/09	 08/10/09

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 41989

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243

6-Drill Fwd rivet holes using drill Jig DT8789FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D206-667-243.

8-C'sink holes as per Dwg D206-667-243.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-243

10-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-243
Inside of Cuff(Donot engrave on outside of tube)

81
08-10-14

-AWM 8-10-14

81 08-10-14

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



AWM 8-10-14



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

8 08/10/15 (X)

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8 08/10/15 (X)

9.0

OUTSIDE SERV.11

OUTSIDE SERVICE -CROSSTUBES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: 7407

LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

C208110/21 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/09/2008 10:43:48 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 41989

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

Peppas (1)

11.0

QC6

DIMENSIONAL CHECK



Comment: Inspect for damage & ensure results are as per Dwg D206-667-103

SO 08/10/24

12.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

RT 08-10-23

13.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

SO 08/10/24

(X1)

14.0

D2873045

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number

Description Batch

2 D2873-045

Nut Plate

37742^{x1} / 38316^{x1}

RT 08-10-21

15.0

D2873043

Nut Plate Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number

Description Batch

2 D2873-043

Nut Plate

37769

RT 08-10-21

16.0

MS20601AD4W10

RIVET



Comment: Qty.: 14.0000 Each(s)/Unit Total: 14.0000 Each(s)

Pick:

Qty Part number

Description Batch

14 MS20601AD4W10 Rivet

108673

RT 08-10-21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/09/2008 10:43:48 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 41989

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install nut plates as per Dwg D206-667-243.

RT 08-10-21

18.0

D3595075450

RUBBER CUSHION .75" x 4.50



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
RUBBER CUSHION .75" x 4.50

340221

RT 08-10-27

19.0

D28921

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)
Pick:

Magnabond 6397 106966 RT 08-10-27

Qty Part number Description Batch

2 D2892-1

Support

35581

RT 08-10-27

20.0

MS2192022

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Pick:

Qty Part number Description Batch

4 MS21920-22

Clamp

107356

RT 08-10-27

21.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8580. .Note: (3) top holes should be facing up.

RT 08-10-27

2-Install supports and clamps as per Dwg D206-667-243 Torque clamps to 80-100 in lb

RT 08-10-28

22.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/10/28 RT

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/09/2008 10:43:48 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206L AFT X-TUBE

Job Number: 41989

Part Number: D206667203

Job Number:



Seq. #:	Machine Or Operation:	Description :
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23.0	PACKAGING 1	PACKAGING RESOURCE #1
------	-------------	-----------------------



Comment: PACKAGING RESOURCE #1
Pick Packing Kit

24.0	AN534A	Bolt
------	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Bolt
Batch: M107013

SP

25.0	MS21042L5	Nut
------	-----------	-----



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Nut
Batch: M108827

SP

26.0	AN510A	Bolt
------	--------	------



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
10 AN5-10A Bolt M108990

SP

27.0	AN532A	Bolt
------	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
4 AN5-32A Bolt M109061

SP

28.0	AN960JD516	Washer
------	------------	--------



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
18 AN960JD516 Washer M109059

8/10/08

SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/09/2008 10:43:48 AM
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Process Sheet

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Drawing Name: 206L AFT X-TUBE

Job Number: 41989

Part Number: D206667203

Job Number:



Seq. #:

Machine Or Operation:

Description :

29.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

8/10/28 (X)

30.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-667-203

Location: _____

PPP Rev: _____

D

8/10/28

(X)

50

31.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

8/10/28

(C)

Job Completion



U 8/10/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

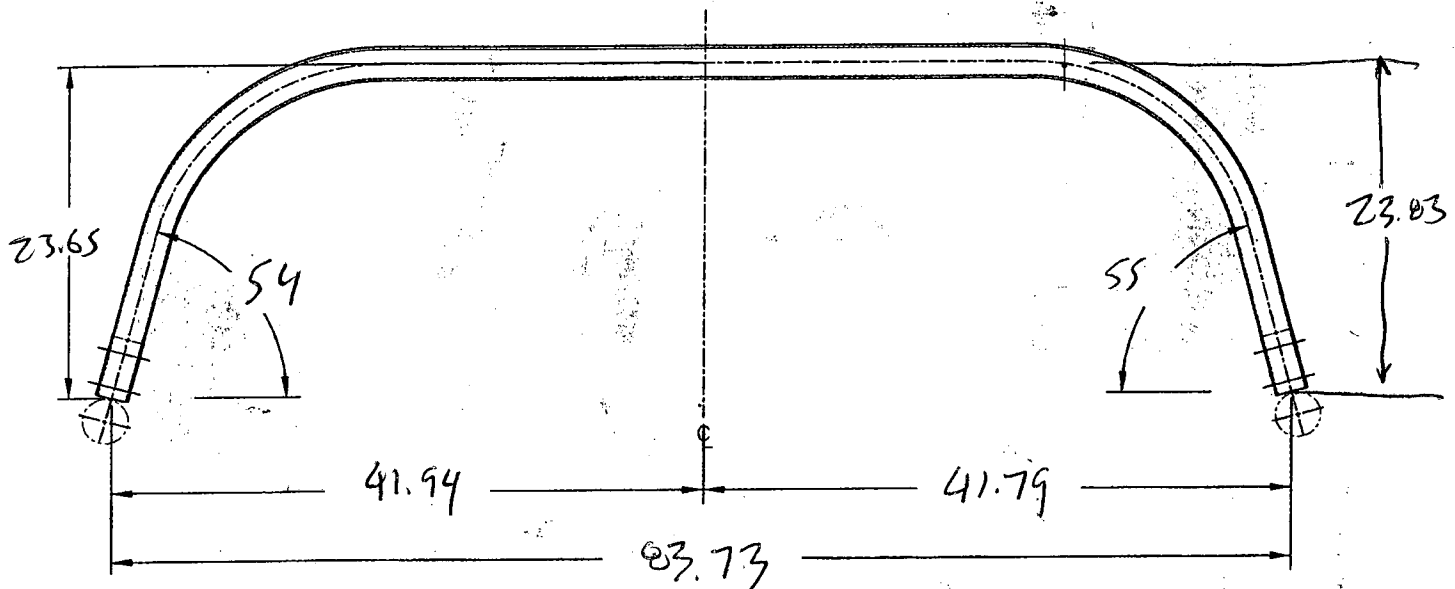
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 41989
Description: Crosstube High Aft (206L)		Part Number: D206-667-203
Inspection Dwg: D206-667-243 Rev: B		Page 1 of 1

Required Dimension	Min	Max
Height	23.46	23.58
1/2 Span	41.86	41.98
Angle	54	56
Total Span	83.72	83.96



Comments

QC15 Inspection Date	02.10.14
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Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	[Signature]

DART

DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED # DS	APPROVED # DS	DRAWING NO. D206-667-243	REV. B SHEET 1 OF 3
DATE 05.07.26		TITLE CROSSTUBE ASS'Y (206L HIGH AFT) SCALE NTS	
A	00.11.17	NEW ISSUE	
B	05.07.26	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	

RELEASED
05-07-26 -H**UNDER REVIEW**06.07.10 REF
12-27-10 JEM:11 F
PH 06.07.11

Qty	Part Number	Description
X	D206-667-243	CROSSTUBE ASSEMBLY
1	D6004-115	CROSSTUBE
2	D2856-400-773	ABRASION STRIP
2	D2873-043	NUT PLATE
2	D2873-045	NUT PLATE
2	D2892-1	SUPPORT
14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
4	MS21920-22	CLAMP

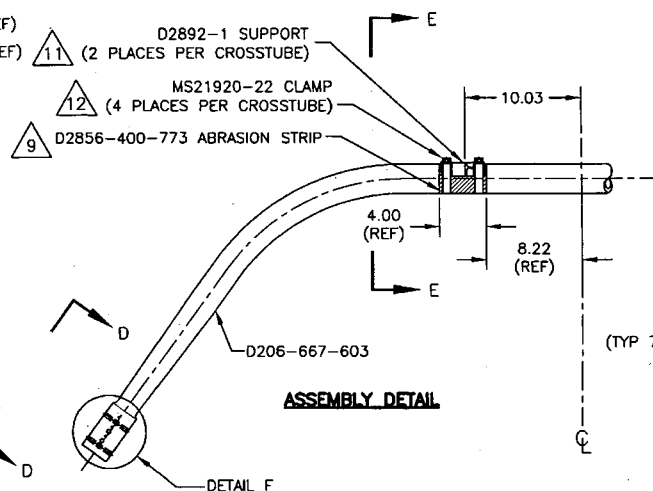
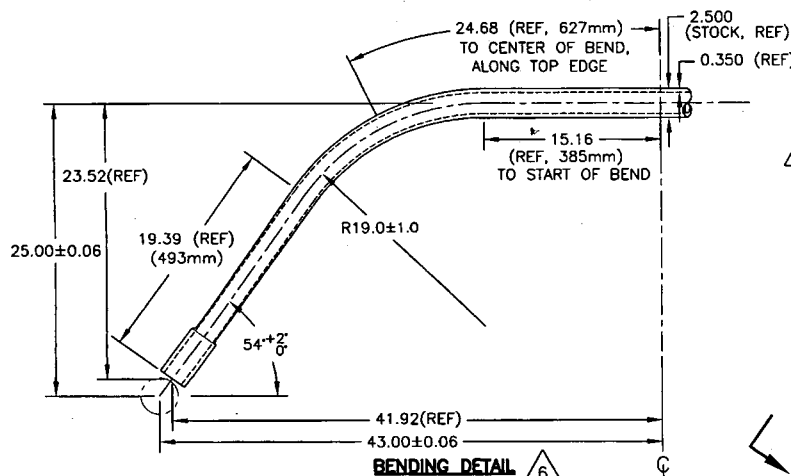
SEE
DSI 9415**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.91 ± 0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2892-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) IT IS OPTIONAL TO SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

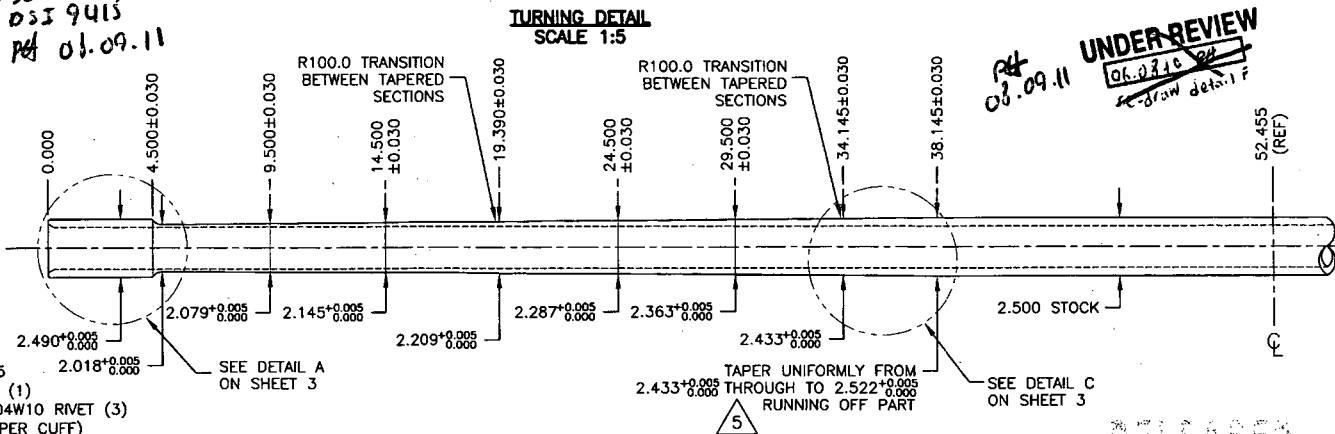
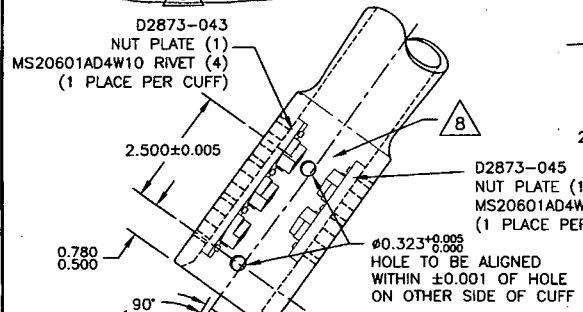
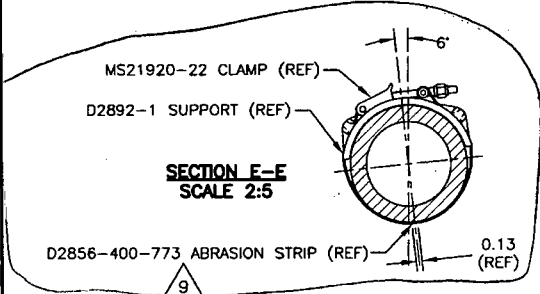
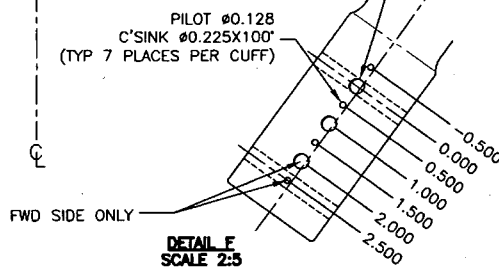
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Ø0.323^{+0.005}_{-0.000}
(TYP 5 PLACES PER CUFF)
HOLE TO BE ALIGNED WITHIN ±0.001
OF HOLE ON OTHER SIDE OF CUFF



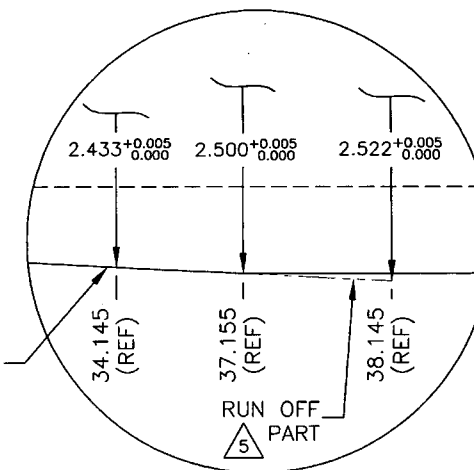
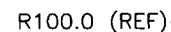
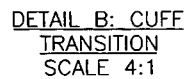
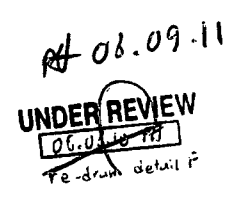
UNDER REVIEW
01.09.11
06.03.16
draw detail F

05.07.26

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THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		CHECKED #DS	APPROVED #DS	DRAWING NO. D206-667-243
		DATE 05.07.26		TITLE CROSSTUBE ASS'Y (206L HIGH AFT)
				SCALE 1:10

NO. 1781
WORK ORDER
SUBJECT TO AMENDMENT
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05.07.26

TITLE	CROSSTUBE ASS'Y (206L HIGH AFT)
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SHEET 3 OF 3

1:1

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WORK ORDER
NO. 91281

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. C AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 2

REF: CANADIAN STC: SH01-5
REF: FAA STC: SR01304NY

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WITHOUT NOTICE
WORK ORDER
41989

For D206-667-101/-201/-103/-203 or D407-667-105 cross tubes at CHG 003 or later, the D2856-400-694/-773 abrasion strip has been removed, the center D2891-1 or D2892-1 support has been bonded onto the crosstube using Magnabond 6398 and D3595-075-395/-450 Rubber Cushions have been installed underneath the MS21920-20/-22 Clamps. Amend parts list of the IIN-D206-667 section 5 and ICA-D206-667 Section 32.8 as follows:

REMOVE:

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
13	2	2	2		2	D2856-400-694	ABRASION STRIP
14				2		D2856-400-773	ABRASION STRIP

ADD:

ITEM	QTY -101	QTY -201	QTY -103	QTY -203	QTY -105	PART NUMBER	DESCRIPTION
24	4	4	4		4	D3595-075-395	RUBBER CUSHION
25				4		D3595-075-450	RUBBER CUSHION

To prevent the supports from shifting on the D206-667-101/-201/-103/-203 or D407-667-105 crosstubes at CHG 002 or earlier, the D2891-1/D2892-1 supports should be removed and re-installed as follows:

- Follow section 32.1 of ICA-D206-667 for the removal of the crosstubes from the helicopter.
- Remove the qty (2) MS21920-20/-22 clamps from the crosstube that fasten the D2891-1/D2892-1 supports to the crosstube.
- Remove the D2856-400-694/-773 abrasion strip from the crosstube per section 32.5 of ICA-D206-667.
- Inspect the crosstube surface underneath the support for corrosion and mechanical damage per items 5.3.1 and 5.3.2 of the 300 hour inspection of ICA-D206-667. Repair damage within acceptable limits per item 5.3.3 of the 300 hour inspection in ICA-D206-667. Touch up finish per item 5.3.9 of the 300 hour inspection.
- Abrade area to which support will be applied with 400 grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe area until there is no residue.
- Apply a 0.03" to 0.06" thick layer of Magnabond 6398 underneath the D2891-1/D2892-1 support and re-install the support on the crosstube as shown in Figure 1. Position and secure the D2891-1/D2892-1 support on the crosstube using MS21920-20/-22 Clamps. Install a D3595-075-395/-450 Rubber cushion underneath each MS21920-20/-22 Clamp. Torque clamps 80-100 in-lb. Let the D206-667-101/-201/-103/-203 or D412-667-105 crosstube assembly cure as per the Magnabond 6398 instructions before re-installing the crosstube on the aircraft.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: D. Shepherd
D. SHEPHERD (DE # 02)

DATE: 08.05.26
CERT. NO.: SH01-5
ISSUE NO.: 3

A	NEW ISSUE	HS	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	HS		
CHECKED	PH	DRAWING NO.	REV. A
MFG. APPR.	B	DSI 9415	SHEET 1 OF 2
APPROVED	UP	TITLE	SCALE
DE APPR.		CROSSTUBE SUPPORT CHANGE	NTS
DATE	08.05.26	COPYRIGHT © 2008 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

7) Re-install the D206-667-101/-201/-103/-203 or D412-667-105 crosstube per section 32.2 of ICA-D206-667.

For customers who would like to upgrade their D206-667-101/-201/-103/-203 or D412-667-105 crosstubes from CHG 002 or earlier to CHG 003, the following kit can be obtained from Dart:

QTY -011	QTY -013	PART NUMBER	DESCRIPTION
X		DSI 9415-011	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-101/-201/-103 OR D407-667-105)
	X	DSI 9415-013	CROSSTUBE SUPPORT CHANGE (USABLE ON D206-667-203)
4		D3595-075-395	RUBBER CUSHION
	4	D3595-075-450	RUBBER CUSHION

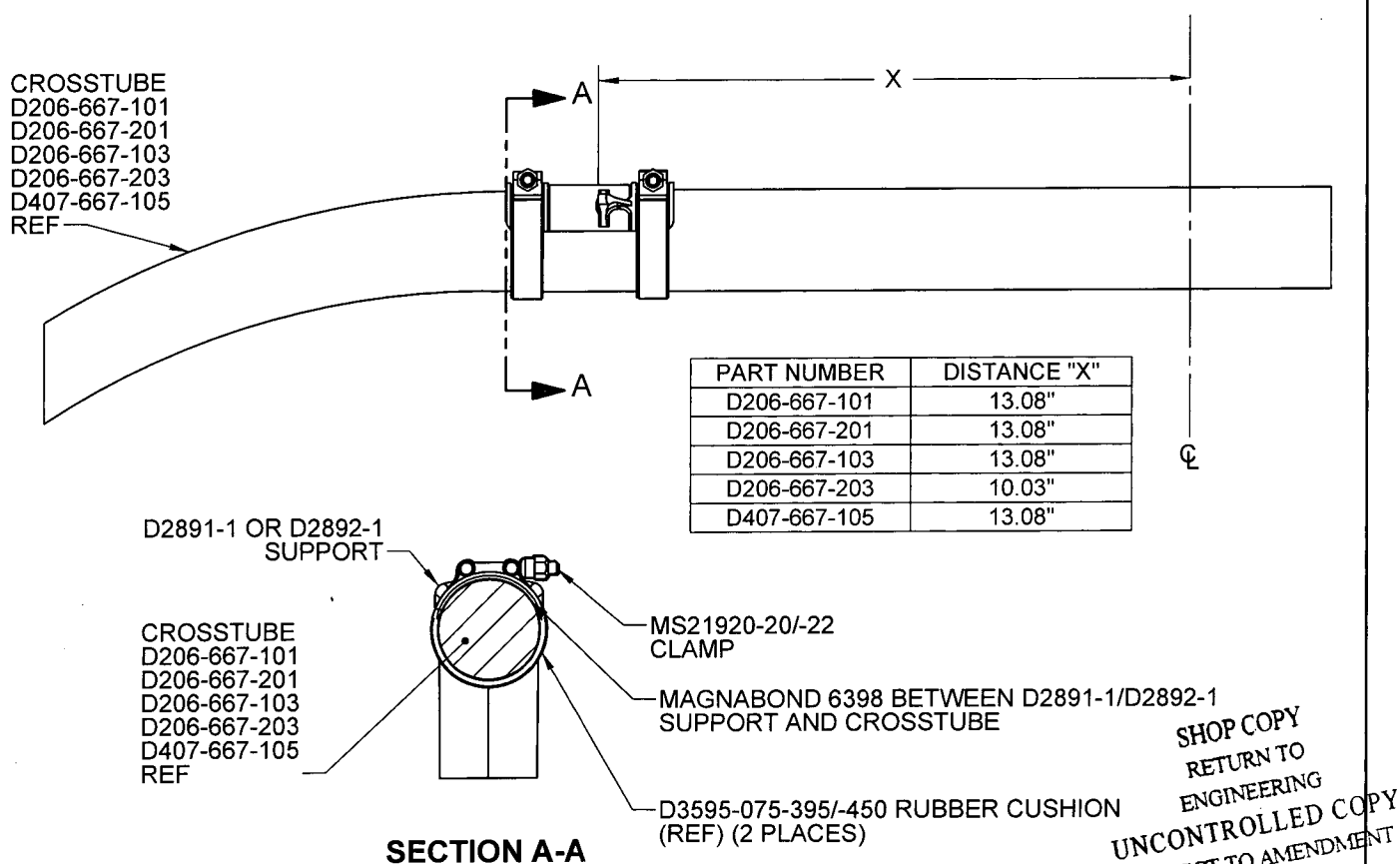


FIGURE 1 - CROSSTUBE SUPPORT

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: D. Shepherd (DE # 02)

DATE: 08.05.26
CERT. NO.: SH01-5
ISSUE NO.: 3

DESIGN	HS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	HS	
CHECKED	PH	DRAWING NO. REV. A
MFG. APPR.	E	DSI 9415 SHEET 2 OF 2
APPROVED	UP	TITLE SCALE
DE APPR.		CROSSTUBE SUPPORT CHANGE NTS
DATE	08.05.26	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 41989



LIQUID PENETRANT TEST REPORT

P- 09128

PAGE 1 OF 1

CLIENT Dart Aerospace DATE 2008-10-20 TIME AM ☐ PM ☐
ATTENTION Linda Lacelle ACUREN JOB NO. 188-08-1549
ADDRESS 1270 Aberdeen st. POWO No. _____
Hawkesbury, ont. WORK LOCATION Hawkesbury
ACCEPTANCE STD. ASTM 1417/031-038 REV./DATE 2005
PROJECT 212/205 HIGH FWD X-TUBE ASSEMBLY, 206L AFT X-TUBE, 04-58 FWD X-TUBE ASSEMBLY,
ITEM(S) EXAMINED Subs 42307, 42308, 41990, 41989, 41398, 41399, 41400

JOB DESCRIPTION _____ PROCEDURE NO. LT-0003 REV./DATE _____ TECHNIQUE NO. LT-0002 REV./DATE _____
PART NO. D212664101, D206667203, D058676101, D058676201 MATERIAL ALODINE ALUM. THICKNESS _____
SCOPE WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE

TEST DETAILS

METHOD	<input checked="" type="checkbox"/> FLUORESCENT	<input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH	<input type="checkbox"/> SOLVENT REMOVABLE	<input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND	<u>MAGNAFLUX</u>		BLACK LIGHT S/N <u>8171</u>	<input type="checkbox"/> OUTPUT > 1000 μ W/cm ²	<input type="checkbox"/> AMBIENT < 2 fc
PENETRANT	MINIMUM DWELL TIME	<u>30</u> MIN.	LIGHTING EQUIP. <input checked="" type="checkbox"/> FLASHLIGHT	<input type="checkbox"/> TROUBLELIGHT	<input type="checkbox"/> OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER	<u>H2O</u>	MINIMUM DRY TIME	OTHER <u>CAL FEB 12 09</u>		
DEVELOPER	<u>SKDS2</u>	MINIMUM DWELL TIME	LIGHT METER S/N _____ CAL DUE DATE _____		
DEVELOPER TYPE	<input checked="" type="checkbox"/> NON AQUEOUS	<input type="checkbox"/> AQUEOUS	<input type="checkbox"/> DRY		

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < - 4°C/ 20°F ☐ - 4°C/ 20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

ITEM #	COMMENTS	ACCEPT	REJECT
<u>42307</u>	<u>ACCEPTABLE</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>42308</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>41990</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>41989</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>41398</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>41399</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>41400</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE <u>[Signature]</u>	SIGNATURE	DTR #
TECHNICIAN (SIGNATURE): <u>[Signature]</u>		REPORT REVIEWED BY:
NAME (PRINT): <u>FREDERICK CHAGNON</u>	1 st TECHNICIAN	NAME INITIALS
CGSB LEVEL <u>IV</u> SNT LEVEL <u>IV</u>	CGSB LEVEL _____ SNT LEVEL _____	
CGSB REG. No <u>10560</u>	CGSB REG. No _____	

Date: Thursday, 11/09/2008 10:43:48 AM
User: Julie Lecocq

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 206L AFT X-TUBE
Job Number : 41989
Estimate Number : 10973
P.O. Number :
This Issue : 11/09/2008 S.O. No. :
Prsht Rev. : NC Part Number : D206667203
First Issue : / / Type : CROSSTUBES Drawing Number : D206-667-243 REVB
Previous Run : 41817 Project Number : N/A
Drawing Revision : B
Material :
Due Date : 26/09/2008 Qty: 1 Um: Each

Written By :
Checked & Approved By : JUD 08.9.11
Comment : Est Rev:F 05.09.01 Add holes for compatibility with Bell
Skidtubes KJ/JLM
Est Rev:G 08-06-03 update as per DSI9415 (ECN1198) DD
verified by:ec
Est Rev:H 08-07-18 remove thread masking in step 12 DD
verified by:EC

REFERENCE ONLY

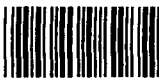
Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



JUD 08.9.16



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D206-667-203 CHG003

2.0 D206667203TRN Crosstube Turning Detail



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch

3.0 BENDING

BENDING MACHINE - SKIDTUBES

Comment: BENDING MACHINE